UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,829	05/27/2005	Hiroe Nakagawa	Y31-184577C/KK	6633

21254 7590 02/18/2009

MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC
8321 OLD COURTHOUSE ROAD
SUITE 200
VIENNA, VA 22182-3817

EXAMINER	
HODGE, ROBERT W	

ART UNIT	PAPER NUMBER
1795	

MAIL DATE	DELIVERY MODE
02/18/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/536,829	NAKAGAWA ET AL.	
	Examiner	Art Unit	
	ROBERT HODGE	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 May 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/27/05 & 12/6/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 5/27/05 and 12/6/06 have been considered by the examiner.

Specification

The disclosure is objected to because of the following informalities: The instant specification refers to claim numbers which must be removed from the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "the anion species" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 3-57168 hereinafter Kuriyama.

Through an Oral Translation, Kuriyama teaches a nonaqueous-electrolyte battery which comprises a positive electrode, a negative electrode, and a nonaqueous electrolyte, which comprises an organic solvent such as propylene carbonate and a lithium salt dissolved therein, characterized by containing at least one quaternary ammonium salt in an amount of 0.06 mol/L or larger and 0.5 mol/L or smaller (see also English abstract provided by applicants).

Claims 1-5 and 7-10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by WO 01/86748 (U.S. Patent No. 7,029,793 is used as the English Equivalent) hereinafter Nakagawa.

Nakagawa clearly anticipates the instantly claimed invention, see Column 2, line 64 – column 8, line 39 and embodiments 1-10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2, 4, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuriyama as applied to claim 1 above, and further in view of U.S. Patent No. 4,877,695 hereinafter Cipriano.

Kuriyama does not teach the specific quaternary ammonium salt used in the electrolyte.

Cipriano teaches a nonaqueous-electrolyte battery which comprises a positive electrode, a negative electrode, and a nonaqueous electrolyte, which comprises an organic solvent such as propylene carbonate and, characterized by containing at least one quaternary ammonium salt such as tetraalkyl ammonium tetrafluoroborate salts including but not limited to tetraethylammonium tetrafluoroborate and tetrabutylammonium tetrafluoroborate in an amount of about 0.5 mol/L (column 2, line 53 – column 4, line 19).

At the time of the invention it would have been obvious to one having ordinary skill in the art to provide a quaternary ammonium salt such as tetraalkyl ammonium

tetrafluoroborate salts including but not limited to tetraethylammonium tetrafluoroborate and tetrabutylammonium tetrafluoroborate in the electrolyte of Kuriyama as taught by Cipriano in order to provide a battery which has a high discharge capacity and a high discharge efficiency. If a technique has been used to improve one device (providing tetraalkyl ammonium tetrafluoroborate salts in an electrolyte) and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way (providing a battery that has a high discharge capacity and a high discharge efficiency), using the technique is obvious unless its actual application is beyond his or her skill. See MPEP 2141 (III) Rationale C, KSR v. Teleflex (Supreme Court 2007).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuriyama as applied to claim 5 above, and further in view of U.S. Patent No. 4,304,825 hereinafter Basu.

Kuriyama does not teach that the negative electrode employs graphite.

Basu teaches a nonaqueous-electrolyte battery which comprises a positive electrode, a negative electrode that employs graphite, and a nonaqueous electrolyte (column 1, line 37 – column 2, line 30).

At the time of the invention it would have been obvious to one having ordinary skill in the art to employ graphite in the negative electrode of Kuriyama as taught by Basu in order to provide a battery that permits extensive cycling with minimum reduction in cell capacity and cell voltage. If a technique has been used to improve one device (employing graphite in the negative electrode) and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way (providing a

battery that permits extensive cycling with minimum reduction in cell capacity and cell voltage), using the technique is obvious unless its actual application is beyond his or her skill. See MPEP 2141 (III) Rationale C, KSR v. Teleflex (Supreme Court 2007).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuriyama as applied to claim 5 above, and further in view of JP 2001345118 hereinafter Arai.

Kuriyama does not teach a sheath comprising a metal/resin composite material.

Arai teaches a nonaqueous-electrolyte battery which comprises a metal-resin composite film in an armoring case (abstract).

At the time of the invention it would have been obvious to one having ordinary skill in the art to use a metal-resin composite film in an armoring case in Kuriyama as taught by Arai in order to provide a battery that does not bulge with repetitive charge and discharge cycling. If a technique has been used to improve one device (using a metal-resin composite film in an armoring case) and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way (providing a battery that does not bulge with repetitive charge and discharge cycling), using the technique is obvious unless its actual application is beyond his or her skill. See MPEP 2141 (III) Rationale C, KSR v. Teleflex (Supreme Court 2007).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5 and 7-10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 7,029,793. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the instant claims fully encompasses the scope of the claims in U.S. Patent No. 7,029,793, the only difference is the claims of U.S. Patent No. 7,029,793 are further limited with additional structure.

Conclusion

It is noted that several “X” references are cited in the International Search Report, however the majority of the “X" references do not anticipate all of the dependent claims as indicated in the International Search Report and therefore not all of the references have been used in the above grounds of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HODGE whose telephone number is (571)272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Hodge/
Examiner, Art Unit 1795